

1035-00-2017      **Liming W Salvino\*** ([shen@math.sdsu.edu](mailto:shen@math.sdsu.edu)), Naval Surface Warfare Center, Carderock Division,  
West Bethesda, MD 20817-5700. *HHT Applications to Signal Detection on Mechanical Vibration  
Problems in Underwater Vessels.*

Detecting the failure of underwater vessels subject to external impact is a procedure of signal analysis of nonlinear and non-stationary processes. This lecture will describe the HHT applications for the detection. It will be shown that classical signal analysis techniques, such as FFT and wavelet analysis, may yield incorrect detection, while the HHT is a more effective signal detection tool. (Received September 21, 2007)